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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/757,039	01/14/2004	Ronald E. Rygielski	120 04765 US	3218

128 7590 09/16/2008
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EXAMINER

MOUTAOUAKIL, MOUNIR

ART UNIT	PAPER NUMBER
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2619

MAIL DATE	DELIVERY MODE
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09/16/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/757,039	Applicant(s) RYGIELSKI ET AL.	
	Examiner MOUNIR MOUTAOUAKIL	Art Unit 2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-13 and 15-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-13, and 15-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

Amendments filed on 06-30-2008 have been entered.

Claims 1-5, 7-13, and 15-18 are pending in this application.

Claims 6 and 14 has been cancelled.

Claims 1-5, 7-13, and 15-18 are still rejected.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-5, and 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barney et al, PG PUB 20020072875 (hereinafter Barney), in view of Dick et al PG PUB 2003/0147362 (hereinafter Dick) and further in view of Crocker et al (US 7,065,779). Hereinafter referred to as Barney, Dick, and Crocker.

With respect to Claim1

Barney teaches a plurality of controllers and a communication network connecting each of the controllers (See section [0004], lines 3-6); determining a time synchronization function is enabled (See section [0004], lines 6-8, as well as section [0011], where establishing an operating characteristic is substantively the same as synchronization function, as well as section [0015], lines 5-10, where synchronization is performed only when machine is operating);

Barney further teaches determining a time difference between said communications network time and said module reference time provided by said module (See section [0019]); determining that said determined time difference is greater than a first limit, and less than or equal to a second limit; and automatically adjusting, (See section [0020], lines 6-10, where one clock is automatically held or paused, until the difference has been gradually reduced or eliminated) automatically, said network communications network time to synchronize with said module reference time over a predetermined synchronization interval (See section [0019], lines 9-12], as well as section [0021], as well as section [0020], line 12-16, where synchronization is automatic, where synchronization is done over an interval).

Barney further teaches determining a predetermined synchronization and adjusting time (see section 20).

Barney does not teach determining a correction rate, and adjusting time based on correction rate.

Dick which is in the same field of endeavor (time synchronization), teaches determining

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a correction rate and adjusting time based on correction rate (see section [0076] and [0069]. Also see section [0041] and section [0043]). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to determine a correction rate, and use it for time adjustment as taught by Dick in the invention of Barney, in order to avoid misinterpretation of data by a receiving station, as synchronization allow receiving station to properly interpret data packet received. Barney in view of Dick discloses all the limitations of the claimed invention with the exception that a master module periodically communicates network communication time to the other modules in the network. However, Crocker, from the same field of endeavor, discloses a synchronization technique where a master node, periodically, provides current timestamp data to a plurality of network nodes/slave devices for the purpose of synchronizing themselves with the master node (see col.19, lines 40-45). Thus, it would have been obvious to a person of ordinary skill in the art at the time of the invention to employ the synchronization technique, as taught by Crocker, in the network of Barney in view of Dick for the reason stated above.

With respect to Claim 2

Barney further teaches gradually adjusting results in a reduction of said time difference between said communications network time and said module reference time that is substantially constant and without a time reversal. (See section [0021], where by setting local time to official time means reducing difference between the two to zero, as well as section [0020], lines 1-10, where local time synchronization is either done by fast forwarding the clock or pausing the clock, but never backward which is substantively the

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same as reverse).

With respect to Claim 3

Barney further teaches determining that a system change is requested; and in response to said system change request, immediately synchronizing, automatically, said communications network time and said module reference time (See section [0020], lines 1-3).

With respect to Claim 4

Barney further teaches two of the alternative limitation of claim 4 which is; system change is a module being initialized for providing said module reference time (See section [0019], lines 1-7, where master controller is the reference controller), and a user-initiated time synchronization (See section [0022], lines 5-12, where an operator will perform the synchronization)

With respect to Claim 5

Barney further teaches determining that the time difference between said communications network time and said module reference time is greater than a third limit that is greater than said second limit (See section [0022], lines 1-4); and in response to said time difference being greater than said third limit, taking no automatic action to synchronize said time difference between said communications network time and said module reference time. (See section [0022], lines 4-13, where no action is automatically taken; by the system as oppose to be manually updated by a technician)

With respect to Claim 7-11

Claims 7-11 are rejected for the same reason as rejected claims 1-5, except for a

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storage medium having instruction to perform the above limitation

Barney disclose controller that inherently comprise medium storage suitable to carry the instruction to perform the above limitation (see section [0009]).

4. Claims 12-13 and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barney et al, PGPUB 20020072875 (hereinafter Barney), in view of Kirk, Patent No 4709347, (hereinafter Kirk), in view of Dick et al PGPUB 2003/0147362 (hereinafter Dick), and further in view of Crocker.

With respect to Claim 12

Barney teaches a plurality of controllers and a communication network connecting each of the controllers (substantively the same as module) (See section [0004], lines 3-6); with one of the controller a master controller (see section [0019], lines 1-3).

Barney disclose modules/controller with a time synchronization function (see section [0012]),

Determines a time difference between said communications network, time and said module reference time provided by said module (section [0019]) determines that the determined time difference is greater than a first limit, and less than or equal to a second limit (see section [0021]). Barney further teaches that the controller determine a predetermined synchronization and adjusting time (see section 20]).

Barney does not teach that the module/controller determines a correction rate, and adjusting time based on correction rate. Barney does not teach module comprising: a processor; a network interface for providing a communication interface to said communications network; a bus interface for providing a communication interface to a

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host processor; and a system clock subsystem for providing said module reference time and for controlling a time synchronization function to reduce a time difference between said communications network time and said module reference time. However, Dick which is in the same field of endeavor (time synchronization), teaches determining a correction rate and adjusting time based on correction rate (see section [0076] and [0069]. Also see section [0.041] and section [0043]). Thus, It would have been obvious to one of ordinary skill in the art at the time the invention was made to determine a correction rate, and use it for time adjustment as taught by Dick in the invention of barney, in order to avoid misinterpretation of data by a receiving station, as synchronization allow receiving station to properly interpret data packet received.

Kirk which is in the same field of endeavor (clock synchronization in a network), disclose a clock synchronization system with a master station and slave station (See abstract, lines 1-4, as well as column 1, lines 60-68, column 2, lines 31-36), comprising

A processor (See figure 2, item 36-04, as well as column 4, lines 57-65), a network interface (See figure 2, item 18-04, as well as column 4, lines 12-18), a bus interface (figure 2, item 16-04, as well as column 4, lines 12-13), and a system clock (see fig 2, item 48-04, as well column 5, lines 5-10). Thus, It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a module comprising a processor, network interface, bus interface and system clock subsystem in order to synchronize to a desired degree of accuracy the timing subsystems of the modules of a distributed local area network by the master and the slave (See abstract, lines 1-5).

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Barney in view of Kirk in view of Dick discloses all the limitations of the claimed invention with the exception that a master module periodically communicates network communication time to the other modules in the network. However, Crocker, from the same field of endeavor, discloses a synchronization technique where a master node, periodically, provides current timestamp data to a plurality of network nodes/slave devices for the purpose of synchronizing themselves with the master node (see col.19, lines 40-45). Thus, it would have been obvious to a person of ordinary skill in the art at the time of the invention to employ the synchronization technique, as taught by Crocker, in the network of Barney in view of Dick for the reason stated above.

With respect to Claim 13

Barney further teaches gradually adjusting results in a reduction of said time difference between said communications network time and said module reference time that is substantially constant and without a time reversal. (See section [0021], where by setting local time to official time means reducing difference between the two to zero, as well as section [0020], lines 1-10, where local time synchronization is either done by fast forwarding the clock or pausing the clock, but never backward which is substantively the same as reverse).

With respect to Claim 15

Barney further teaches determining that a system change is requested; and in response to said system change request, immediately synchronizing, automatically, said communications network time and said module reference time (See section [0020], lines 1-3).

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With respect to Claim 16

Barney further teaches two of the alternative limitation of claim 4 which is; system change is a module being initialized for providing said module reference time (See section [0019], lines 1-7, where master controller is the reference controller), and a user-initiated time synchronization (See section [0022], lines 5-12, where an operator will perform the synchronization)

With respect to Claim 17

Barney further teaches determining that the time difference between said communications network time and said module reference time is greater than a third limit that is greater than said second limit (See section [0022], lines 1-4); and in response to said time difference being greater than said third limit, taking no automatic action to synchronize said time difference between said communications network time and said module reference time. (See section [0022], lines 4-13, where no action is automatically taken; by the system as oppose to be manually updated by a technician)

With respect to Claim 18

Barney does not teach time synchronization function including a predetermined synchronization interval operates on a periodic basis.

Dick teaches a network controller having a synchronization function including said predetermined synchronization interval operates on a periodic basis (see section [0041], where update is done once per unit of time.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to synchronize clock in a communication network, as taught by Dick in the

invention of barney, in order to avoid misinterpretation of data by a receiving station, as synchronization allow receiving station to properly interpret data packet received.

Response to Arguments

5. Applicant's arguments with respect to claims 1-5, 7-13, and 15-18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO_892.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified

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citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

When responding to this office action, applicants are advised to clearly point out the patentable novelty which they think the claims present in view of the state of the art disclosed by the references cited or the objections made. Applicants must also show how the amendments avoid such references or objections. See 37C.F.R 1.111(c). In addition, applicants are advised to provide the examiner with the line numbers and pages numbers in the application and/or references cited to assist examiner in locating the appropriate paragraphs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MOUNIR MOUTAOUAKIL whose telephone number is (571)270-1416. The examiner can normally be reached on Monday-Thursday (1pm-4:30pm) eastern time.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on 571-272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mounir Moutaouakil/
Examiner, Art Unit 2619

/Hassan Kizou/
Supervisory Patent Examiner, Art Unit 2619